

Remarks:

1. Rejections

Claims 1-3, 5-9, and 11-14 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 6,361,283 to Ota et al. (“Ota”). In addition, claims 4 and 10 stand rejected under 35 U.S.C. § 103(a), as allegedly rendered obvious by Ota in view of U.S. Patent Application Publication No. 2003/0031569 A1 to Hayashi et al. (“Hayashi.”). Applicant respectfully disagrees.

2. 35 U.S.C. § 102(b)

Claims 1-3, 5-9, and 11-14 stand rejected as allegedly anticipated by Ota. “A claim is anticipated if and only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP 2131. The Office Action alleges that Ota describes each and every element as set forth in claims 1-3, 5-9, and 11-14. Applicant respectfully disagrees.

Applicant’s independent claim 1 recites, in part: “a constant differential pressure valve arranged to open when a differential pressure between upstream and downstream pressures of the throttling valve reaches a predetermined value, thereby introducing compressor discharge gas to a crank chamber.” (Emphasis added.) Thus, in Applicant’s claimed invention as set forth in independent claim 1, the constant differential pressure valve opens when the differential pressure between upstream and downstream pressures of the throttling valve reaches a predetermined value in order to introduce compressor discharge gas into the crank chamber.

The Office Action asserts that Ota discloses “a constant differential valve (between rod portions 83 and 84) arranged to open when a differential pressure between

upstream (P_c) and downstream (P_d) pressures of the throttling valve 82 reaches a predetermined value.” Office Action, Page 2, Lines 20 and 21; and Page 3, Lines 1 and 2. As such, the Office Action asserts that pressure P_c corresponds to Applicant’s claimed upstream pressure in the throttling valve, and pressure P_d corresponds to Applicant’s claimed downstream pressure in the throttling valve.

Ota states that pressure P_c corresponds to the pressure inside crank chamber 5, and pressure P_d corresponds to the pressure inside discharge chamber 22. In response to Applicant’s previous arguments, the Office Action asserts that “the upstream pressure of the throttling valve 82 [is] equal to the crank chamber pressure P_c , and the downstream pressure [is] equal to the discharge pressure P_d .” *Id.* at Page 5, Lines 14-16. Specifically, the Office Action asserts that “via passages 27a and 28a, the crank chamber pressure is connected to the upstream portion of throttle valve 82, and the discharge chamber pressure is connected to the downstream portion of the throttle valve, respectively.” *Id.* at Lines 17-20. Applicant respectfully disagrees.

In Ota, a housing 51 has a through hole 52 formed therethrough, and throttle valve 82 is positioned within throughhole 82. See, e.g., Ota, Figure 2. The upstream portion of throughhole 52 may be in fluid communication with the crank chamber via passage 27a, and the downstream portion of throughhole 52 may be in fluid communication with the discharge chamber 28a. Consequently, the upstream pressure of throughhole 52 may be the same as pressure P_c in the crank chamber, and the downstream pressure of throughhole 52 may be the same as the pressure P_d in the discharge chamber. Nevertheless, neither the upstream portion inside throttle valve 82 nor the downstream portion inside throttle valve 82 is in fluid communication with the crank chamber and the discharge chamber, respectively. As such, neither the upstream pressure inside throttle valve 82 nor the downstream pressure inside throttle

valve 82 is the same as the pressure P_c inside the crank chamber and the pressure P_d inside the discharge chamber, respectively.

Specifically, in Ota, an operation of control valve 50 is controlled by supplying an electric current to the solenoid portion V3 of control valve 50. See, e.g., Ota, Column 6, Lines 51-65. The solenoid portion V3 displaces a transmission rod 80 in the control valve 50 and the throttling valve 82 (a separator) is provided as a portion of the transmission rod 80. Ota states:

The discharge pressure P_d is applied to the lower zone of the through hole 52, and the crank pressure P_c is applied to the upper zone of the through hole 52 and to the inlet valve chamber 64. Also, the outer diameter of the separator 82 of the rod 80 is substantially equal to the outer diameter of the valve body portion 84. Therefore, the force applied to the rod 80 by the discharge pressure P_d is equal to the force applied to the rod 80 by the crank pressure P_c . Therefore, the rod 80 is accurately controlled by an externally supplied current.

Accordingly, it is clear that the throttling valve 82 is not driven by a differential pressure between upstream and downstream pressures of the throttling valve 82, and instead, is driven by the transmission rod 80. Consequently, Ota fails to disclose “a constant differential pressure valve arranged to open when a differential pressure between upstream and downstream pressures of the throttling valve reaches a predetermined value, thereby introducing compressor discharge gas to a crank chamber,” as set forth in Applicant’s independent claim 1. Therefore, Applicant respectfully requests that the Examiner withdraw the anticipation rejection of independent claim 1 at least for this reason.

Claims 2, 3, 5-9, and 11-14 depend from allowable, independent claim 1. Therefore, Applicant respectfully requests that the Examiner also withdraw the anticipation rejection of claims 2, 3, 5-9, and 11-14 at least for this reason.

3. 35 U.S.C. § 103(a)

Claims 4 and 10 stand rejected as allegedly rendered obvious by Ota in view of Hayashi. Ota fails to disclose “a constant differential pressure valve arranged to open when a differential pressure between upstream and downstream pressures of the throttling valve reaches a predetermined value, thereby introducing compressor discharge gas to a crank chamber,” as set forth in Applicant’s independent claim 1. The Office Action does not assert that Hayashi discloses or suggests this missing limitations. Claims 4 and 10 depend from allowable, independent claim 1. Therefore, Applicant respectfully requests that the Examiner withdraw the obviousness rejection of claims 4 and 10 at least for this reason.

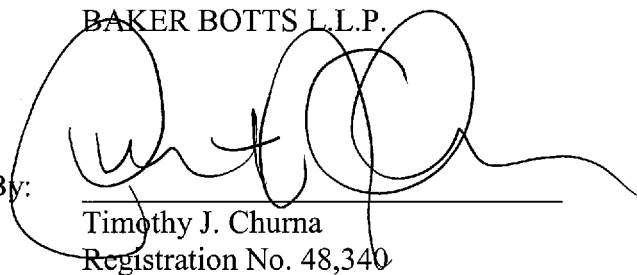
Conclusion:

Applicant respectfully submits that the above-captioned patent application, as amended, is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution of this application may be furthered by discussing the application, in person or by telephone, with Applicant's representative, we would welcome the opportunity to do so. Applicant believes that no fees are due as a result of this Response. Nevertheless, in the event of any variance between the fees determined by Applicant and the fees determined by the U.S. Patent and Trademark Office, please charge or credit any such variance to the undersigned's Deposit Account No. 02-0375.

Respectfully submitted,

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